

a sealing member provided between said first substrate and said second substrate and enclosing said first driver circuit; and

a liquid crystal provided between said first substrate and said second substrate.

### **REMARKS**

Applicants wish to thank the Examiner for the very thorough consideration given the present application and for indicating the allowability of claims 56-60 over the prior art. The *Office Action* of **February 14, 2001**, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for a One (1) Month Extension of Time* that extends the shortened statutory period for response to **June 14, 2001**. Accordingly, Applicants respectfully submit that this response is timely filed. Claims 13-15 and 18-60 were pending in the present application prior to the aforementioned amendment. Due to the above action, claim 44 has been amended to better encompass the full scope and breadth of the invention. Notwithstanding this action, Applicants believe that the claims would have been allowable as originally filed. Applicants assert that no new matter has been added and no claims have been narrowed within the meaning of *Festo*. Accordingly, claims 13-15 and 18-60 are still pending in the present application and, for the reasons set forth below, are believed to be in condition for allowance.

Initially, the *Office Action* rejects claims 25-39 pursuant to 35 U.S.C. §103(a) as unpatentable over *Mawatari et al.* (U.S. Patent No. 5,200,847) in view of *Niki* (U.S. Patent No. 5,278,682), and claims 13-15, 18-22, 24-46 and 50-55 pursuant to 35 U.S.C. §103(a) as unpatentable over *Matsuo* (JP Patent No. 1-49022) in view of *Niki '682*. Applicants respectfully traverse the grounds for rejection for at least the reasons solicited hereinbelow. Accordingly, reconsideration and withdrawal of the pending rejections is respectfully solicited. Applicants hereby incorporate by reference the arguments solicited

in the November 10, 2000 *Amendment*.

The claimed invention is directed generally to an active matrix type display device comprising an active matrix circuit and a driver circuit over the same substrate. In particular, the claimed invention as presently set forth in independent claims 25, 35, 40, 42 and 56 is directed to such an active matrix type display device whereby a sealing member encloses an active matrix circuit and a driver circuit, and an inlet provided to the sealing member on a side edge of opposing first and second substrates and which corresponds to a side of the first substrate in which no driver circuit is disposed. Such a feature is unobviously advantageous over the related art since the driver circuit avoids damage brought upon by static electricity due to liquid crystal flow. Independent claims 30, 35, 41 and 42 set forth a feature whereby the electrical connection between the driver circuit and an electrical element of an opposed substrate is established by a silver paste or an electrically conductive spacer while independent claims 43, 44 and 56 set forth a feature whereby a driver circuit is provided on the opposed substrate.

Applicants respectfully submit that the proposed modifications fail to expressly teach or implicitly suggest each and every feature as set forth in the claimed invention, and thus, fail to establish a *prima facie* case of obviousness. Regarding the rejection of claims 25-39, the *Mawatari et al.* patent fails to disclose an active matrix type display device having an inlet for injecting a liquid crystal between first and second opposing substrates, the inlet being provided to a sealing member on a side edge of the first and second substrates which corresponds to a side of the first substrate in which no driver circuit is disposed, as set forth at least in claims 25 and 35 of the claimed invention.

In the *Office Action*, the Examiner contends that it would have been obvious to one skilled in the art to modify the *Mawatari et al.* device to employ a fill port at the aligned sides (those without drive circuits) for the purpose of avoiding immersion of the substrates. However, the exemplary features set forth in claims 25 and 35 establish a

spatial relationship between the driver circuit and the inlet, and thus, have no correlation to the aligned sides of the substrates. Moreover, even if a skilled artisan were to modify the *Mawatari et al.* device by combining its teachings with those expressed in *Niki '682*, the claimed invention set forth in claims 25-39 would not result since the *Mawatari et al.* patent fails to teach a sealing member which encloses a driver circuit.

Regarding the rejection of claims 13-15, 18-22, 24-46 and 50-55, the Examiner contends that it would have been obvious to one skilled in the art to modify the *Matsuo* device by employing a fill port at the aligned sides with two sides having the circuits for the benefit of avoiding immersion of the substrates. The Examiner further contends that it would have been further obvious to one skilled in the art to use the side of a substrate without the circuit because the sides of the substrate with the circuit have a material enclosed in a sealant which would obstruct the placement of such a port. As previously mentioned, exemplary features set forth in claims 25, 35, 40 and 42 establish a spatial relationship between the driver circuit and the inlet, and thus, have no correlation to the aligned sides of the substrates. Moreover, the *Matsuo* patent expressly discloses an inlet port 14 for introducing liquid crystal on an opposed substrate, and thus, teaches away from providing an inlet port to a sealing member.

Regarding claims 25, 35, 41 and 42, while the *Office Action* supplies references in an attempt to render obvious the feature of at least one silver or electrically conductive spacer to provide an electrical connection between the driver circuit and an electrical element provided on the second substrate, none of the cited references teach, disclose or suggest that such an electrical connection is established between a driver circuit enclosed by a sealing member.

Applicants further contend that the Examiner used impermissible hindsight in concluding that there would have been motivation to place the inlet at the circuit-free side of the first substrate. It is a well-established rule that obviousness cannot be predicated by

hindsight combination to produce the claimed invention. *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). While it is recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. *In re McLaughlin*, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). So long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned solely from the applicant's disclosure, such a reconstruction is proper. *Id.* In the *Response to the Arguments*, the Examiner's admits of no express teaching in the prior art of placing an inlet at the circuit-free side of the first substrate, and attempts to justify this position in characterizing the level of skill in the art would warrant such a finding. If this is in fact true, however, the prior art of record would be replete with express statements or implied suggestions of such a feature. Accordingly, Applicants respectfully request that the Examiner supply evidence in the forthcoming *Office Action* supporting the position that it would have been obvious to one of ordinary skill, in spite of a lack of an express teaching in the prior art of record, to place an inlet at the circuit-free side of the first substrate. Otherwise, withdrawal of the rejections is respectfully requested.

Last, the Examiner fails to address the limitation "a second substrate opposed to said first substrate wherein a second circuit is provided over the second substrate at a region opposed to the first driver circuit", as set forth in claims 43, 44 and 56. Such a feature is not taught, disclosed or suggested in the prior art of record.

Applicants respectfully submits that independent claims 25, 30, 35, 40, 41, 42, 43 and 44 are allowable, for at least the reasons set forth above, over *Mawatari*, *Matsuo* and *Niki*. Applicants further respectfully submit that dependent claims 13-15, 18-22, 24, 26-29, 31-34, 36-39, 45, 46, and 50-55 are also allowable by virtue of their dependency, for at least the reasons set forth above. Accordingly, withdrawal of the rejection of claims 13-15, 18-22, 24-46 and 50-55 under 35 U.S.C. §103(a) is respectfully solicited.

In view of the foregoing, the Applicants believe that claims 13-15 and 18-60 clearly distinguish over the prior art of record and are in proper condition for allowance. Should the Examiner have any questions or concerns regarding this application or believes that any further discussions would help expedite the prosecution thereof, it is respectfully requested that the undersigned be contacted.

Respectfully submitted,



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**Marked-up copy of amended claim.**

44. (Amended) An active matrix type display device comprising:
- a first substrate;
  - an active matrix circuit having a plurality of pixels arranged in a matrix form over said first substrate;
  - at least one first driver circuit for driving said active matrix circuit over said first substrate, each of said active matrix circuit and said first driver circuit comprising thin film transistors provided over said first substrate;
  - a second substrate opposed to said first substrate wherein a second driver circuit is provided over the second substrate at a region opposed to the first driver circuit;
  - a resin material provided between said first and second substrates, said resin material covering said first driver circuit; [and]
  - a sealing member provided between said first substrate and said second substrate and enclosing said first driver circuit; and
  - a liquid crystal provided between said first substrate and said second substrate.